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## DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to a power-source tap.

[0002]

[Description of the Prior Art] A use gestalt, such as being placed on a desk or using it on both sides of touch-down murder in between, was not uniform, the power-source tap used in order to take the power source of the electrical machinery and apparatus on a desk conventionally lacked in stability, and its appearance was bad. There was a thing it enabled it to fix to the desk top plate 50 with a clamp 51 there like the indication technique of JP, 62-137586, U shown in drawing 3.

[0003]

[Problem(s) to be Solved by the Invention] However, since it was the configuration that an end connection 52 is altogether arranged on the desk top plate 50, the case 53 might be enlarged, and it might become the obstacle at the time of working on the desk top plate 50. Moreover, with the clamp 51, although fixed reinforcement was high, it had anchoring and the trouble that demounting took time and effort.

[0004] Therefore, the purpose of this invention is that attain the miniaturization of the part arranged on a desk top plate, and anchoring and removal offer a power-source tap for an easy power-source tap.

[0005]

[Means for Solving the Problem] A power-source tap according to claim 1 is equipped with the up body and lower body which prepared the connector. While turning the end connection of the connector of an up body in the abbreviation rectangular cross direction to the end face of said desk top plate which connects both bodies in the connection section so that it can face across the edge of a desk top plate between said up bodies and said lower bodies, and counters the connection section of a parenthesis It is characterized by turning the end connection of the connector of a lower body to the longitudinal direction and almost same direction of an end face of said desk top plate which counters said connection section.

[0006] Thus, since it has the up body and lower body which prepared the connector, by preparing a connector with large size in a lower body, and preparing a connector with small size in an up body, respectively, the miniaturization of the up body arranged on a desk can be attained, and a desk working plane can be secured. Moreover, since the up body and the lower body are connected in the connection section, anchoring and removal can be simply performed by facing across the edge of a desk top plate between an up body and a lower body. Moreover, since the end connection of the connector of an up body was turned in the abbreviation rectangular cross direction to the end face of the desk top plate which counters the connection section, the plug of the device placed on the desk can be taken out and inserted easily. Moreover, since the end connection of the connector of a lower body was turned to the longitudinal direction and almost same direction of an end face of a desk top plate which counter the connection section, bending of the power cord taken out to the bottom along with the end face of a desk top plate is suppressed to the minimum, and it can connect.

[0007] In claim 1, a power-source tap according to claim 2 makes the connector of an up body two poles, and makes the connector of a lower body three poles. Thus, by arranging the connector of three poles where size is large to the desk top-plate down side, and arranging the connector of two poles where size is small to the desk top-plate up side, on a desk, it does not become the obstacle of an activity but a desk working plane can be secured. Moreover, the frequent device of plug extraction and insertion used on desks, such as laptop, can be easily taken out and inserted by using the connector of two poles of an up body. Moreover, the connector of three poles arranged under a desk top plate fits use of the device which does not have almost extraction and insertion at objects for deferment type devices, such as a desktop.

[0008] In a power-source tap according to claim 3, in claim 1, the connector of a lower body

contains a noise filter. The connector of a lower body can remove a noise with this noise filter.

[0009]

[Embodiment of the Invention] The power-source tap of the gestalt of implementation of this invention is explained based on drawing 1 and drawing 2. As shown in drawing 1, it had this power-source tap with the up body 1 and the lower body 2, and it has connected the side edge of both the bodies 1 and 2 in the connection section 3 so that it can face across the edge of the desk top plate 10 among these up bodies 1 and lower bodies 2. Moreover, the up body 1 contains two connectors 4 of two poles, and the lower body 2 contains four connectors 5 of three poles. [0010] Two end-connection 4a of the connector 4 of two poles is arranged in the front face of the up body 1, and, specifically, two end-connection 5a of the connector 5 of three poles is arranged to each both-sides side of the lower body 2. In an attachment condition, end-connection 4a of the up body 1 is turned in the abbreviation rectangular cross direction by this to the end face of the desk top plate 10 which counters the connection section 3, and end-connection 5a of the lower body 2 is turned to the longitudinal direction and almost same direction of an end face of the desk top plate 10 which counter the connection section 3. Moreover, the connection section 3 consists of elastic material, such as flat spring, and sticks the up body 1 and the lower body 2 to the desk top plate 10 by pressure by the elastic force. Moreover, as for the connector 5 of three poles of the lower body 2, the noise filter is built in, including that from which one pole is a ground. 15 is a power cord.

[0011] Below, the busy condition of this power-source tap is explained. In drawing 2, 6 is devices, such as laptop, and is the frequent type of extraction and insertion which inserts a plug at the time of use and is extracted at the time of un-using it. 7 is devices, such as a desktop, and is a type without almost extraction and insertion which inserts the plug also at the time of un-using it. As shown in this drawing, a power-source tap is attached in the first transition section of the desk top plate 10 by putting the desk top plate 10 between the up body 1 and the lower body 2. Thereby, since end-connection 4a of the up body 1 turns to the front, plug 11a of the power cord 11 of the devices 6, such as laptop who uses it on the desk top plate 10, can be taken out to end-connection 4a and inserted easily.

[0012] Moreover, another desk top plate 12 is arranged behind the above-mentioned desk top plate 10, and the devices 7, such as a desktop, are laid on it. The power cord 13 of the devices 7, such as this desktop, is taken out to the bottom along with the end face which the desk top plates 10 and 12 counter, and connects plug 13a of a power cord 13 to end-connection 5a of the lower body 2 which turned to the side. According to the gestalt of this operation, by forming the connector 5 of three poles where size is large in the lower body 2, and forming the connector 4 of two poles where size is small in the up body 1, respectively, the miniaturization of the up body 1 arranged on a desk can be attained, and it does not become the obstacle of an activity on a desk, but a desk working plane can be secured.

[0013] Moreover, since the up body 1 and the lower body 2 are connected in the connection section 3, anchoring and removal can be simply performed by facing across the edge of the desk top plate 10 between the up body 1 and the lower body 2. Moreover, since the connection section 3 is pinched with both the desk top plates 10 and 12 in this case, attachment reinforcement is high. Moreover, since end-connection 4a of the connector 4 of two poles of the up body 1 was turned in the abbreviation rectangular cross direction to the end face of the desk top plate 10 which counters the connection section 3, plug 11a of the devices 6, such as laptop placed on the desk, can be taken out and inserted easily. Moreover, since end-connection 5a of the connector 5 of three poles of the lower body 2 was turned to the longitudinal direction and almost same direction of an end face of the desk top plate 10 which counter the connection section 3, bending of the power cord 13 of the devices 7, such as a desktop taken out to the bottom along with the end face of the desk top plate 10, is suppressed to the minimum, and it can connect. Moreover, since the connector 5 of three poles of the lower body 2 contained the noise filter, a noise is removable.

[0014] In addition, \*\*\*\*\* [ the number of connectors 4 and 5 / how many ]. Moreover, an end connection may be arranged not only on the front face of the up body 1 but on a rear face. In this case, in drawing 2, extraction and insertion becomes easy for the user of another desk top plate 12.

[0015]

[Effect of the Invention] Since it has the up body and lower body which prepared the connector according to the power-source tap according to claim 1, by preparing a connector with large size in a lower body, and preparing a connector with small size in an up body, respectively, the miniaturization of the up body arranged on a desk can be attained, and a desk working plane can be secured. Moreover, since the up body and the lower body are connected in the connection section, anchoring and removal can be simply performed by facing across the edge of a desk top plate between an up body and a lower body. Moreover, since the end connection of the connector of

an up body was turned in the abbreviation rectangular cross direction to the end face of the desk top plate which counters the connection section, the plug of the device placed on the desk can be taken out and inserted easily. Moreover, since the end connection of the connector of a lower body was turned to the longitudinal direction and almost same direction of an end face of a desk top plate which counter the connection section, bending of the power cord taken out to the bottom along with the end face of a desk top plate is suppressed to the minimum, and it can connect.

[0016] By arranging the connector of three poles where size is large to the desk top-plate down side, and arranging the connector of two poles where size is small to the desk top-plate up side, on a desk, it does not become the obstacle of an activity but a desk working plane can be secured in claim 2. Moreover, the frequent device of plug extraction and insertion used on desks, such as laptop, can be easily taken out and inserted by using the connector of two poles of an up body. Moreover, the connector of three poles arranged under a desk top plate fits use of the device which does not have almost extraction and insertion at objects for deferment type devices, such as a desktop.

[0017] In claim 3, the connector of a lower body can remove a noise with a noise filter.

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TECHNICAL FIELD

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PRIOR ART

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[Description of the Prior Art] A use gestalt, such as being placed on a desk or using it on both sides of touch-down murder in between, was not uniform, the power-source tap used in order to take the power source of the electrical machinery and apparatus on a desk conventionally lacked in stability, and its appearance was bad. There was a thing it enabled it to fix to the desk top plate 50 with a clamp 51 there like the indication technique of JP, 62-137586, U shown in drawing 3.

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EFFECT OF THE INVENTION

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[Effect of the Invention] Since it has the up body and lower body which prepared the connector according to the power-source tap according to claim 1, by preparing a connector with large size in a lower body, and preparing a connector with small size in an up body, respectively, the miniaturization of the up body arranged on a desk can be attained, and a desk working plane can be secured. Moreover, since the up body and the lower body are connected in the connection section, anchoring and removal can be simply performed by facing across the edge of a desk top plate between an up body and a lower body. Moreover, since the end connection of the connector of an up body was turned in the abbreviation rectangular cross direction to the end face of the desk top plate which counters the connection section, the plug of the device placed on the desk can be taken out and inserted easily. Moreover, since the end connection of the connector of a lower body was turned to the longitudinal direction and almost same direction of an end face of a desk top plate which counter the connection section, bending of the power cord taken out to the bottom along with the end face of a desk top plate is suppressed to the minimum, and it can connect.

[0016] By arranging the connector of three poles where size is large to the desk top-plate down side, and arranging the connector of two poles where size is small to the desk top-plate up side, on a desk, it does not become the obstacle of an activity but a desk working plane can be secured in claim 2. Moreover, the frequent device of plug extraction and insertion used on desks, such as laptop, can be easily taken out and inserted by using the connector of two poles of an up body. Moreover, the connector of three poles arranged under a desk top plate fits use of the device which does not have almost extraction and insertion at objects for deferment type devices, such as a desktop.

[0017] In claim 3, the connector of a lower body can remove a noise with a noise filter.

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TECHNICAL PROBLEM

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[Problem(s) to be Solved by the Invention] However, since it was the configuration that an end connection 52 is altogether arranged on the desk top plate 50, the case 53 might be enlarged, and it might become the obstacle at the time of working on the desk top plate 50. Moreover, with the clamp 51, although fixed reinforcement was high, it had anchoring and the trouble that demounting took time and effort.

[0004] Therefore, the purpose of this invention is that attain the miniaturization of the part arranged on a desk top plate, and anchoring and removal offer a power-source tap for an easy power-source tap.

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MEANS

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[Means for Solving the Problem] A power-source tap according to claim 1 is equipped with the up body and lower body which prepared the connector. While turning the end connection of the connector of an up body in the abbreviation rectangular cross direction to the end face of said desk top plate which connects both bodies in the connection section so that it can face across the edge of a desk top plate between said up bodies and said lower bodies, and counters the connection section of a parenthesis It is characterized by turning the end connection of the connector of a lower body to the longitudinal direction and almost same direction of an end face of said desk top plate which counters said connection section.

[0006] Thus, since it has the up body and lower body which prepared the connector, by preparing a connector with large size in a lower body, and preparing a connector with small size in an up body, respectively, the miniaturization of the up body arranged on a desk can be attained, and a desk working plane can be secured. Moreover, since the up body and the lower body are connected in the connection section, anchoring and removal can be simply performed by facing across the edge of a desk top plate between an up body and a lower body. Moreover, since the end connection of the connector of an up body was turned in the abbreviation rectangular cross direction to the end face of the desk top plate which counters the connection section, the plug of the device placed on the desk can be taken out and inserted easily. Moreover, since the end connection of the connector of a lower body was turned to the longitudinal direction and almost same direction of an end face of a desk top plate which counter the connection section, bending of the power cord taken out to the bottom along with the end face of a desk top plate is suppressed to the minimum, and it can connect.

[0007] In claim 1, a power-source tap according to claim 2 makes the connector of an up body two poles, and makes the connector of a lower body three poles. Thus, by arranging the connector of three poles where size is large to the desk top-plate down side, and arranging the connector of two poles where size is small to the desk top-plate up side, on a desk, it does not become the obstacle of an activity but a desk working plane can be secured. Moreover, the frequent device of plug extraction and insertion used on desks, such as laptop, can be easily taken out and inserted by using the connector of two poles of an up body.



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DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] It is the perspective view of the power-source tap of the gestalt of implementation of this invention.

[Drawing 2] It is the side elevation of the busy condition of the power-source tap of the gestalt of operation.

[Drawing 3] It is the side elevation of the conventional power-source tap.

[Description of Notations]

- 1 Up Body
- 2 Lower Body
- 3 Connection Section
- 4 Five Connector
- 4a, 5a End connection
- 10 Desk Top Plate

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[Translation done.]

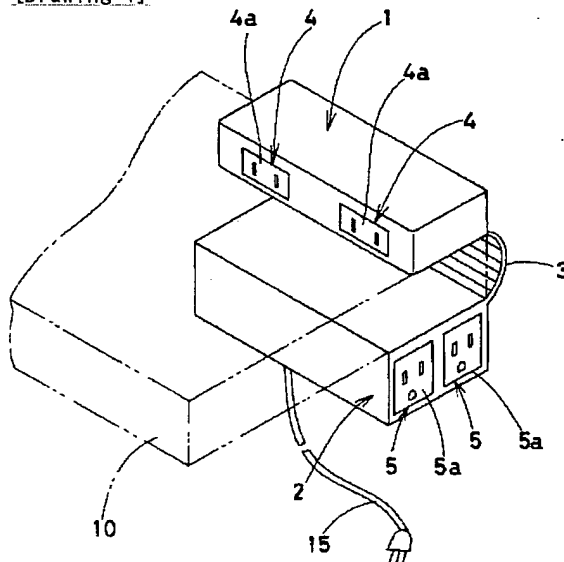
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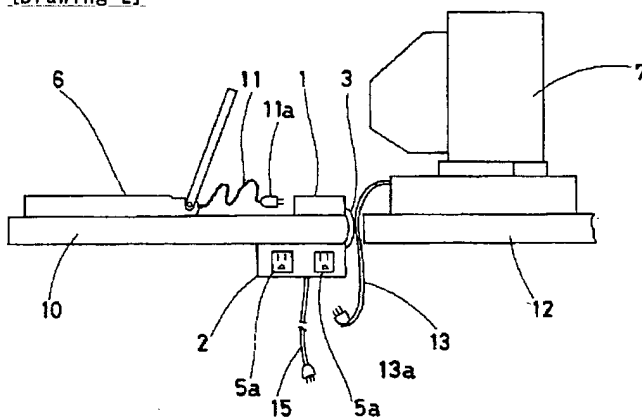
## DRAWINGS

[Drawing 1]

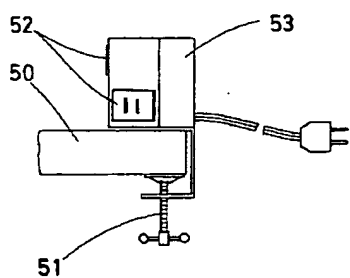


- 1...上部本体  
2...下部本体  
3...接続部  
4, 5...接続器  
4a, 5a...接続口  
10...デスク天板

[Drawing 2]



[Drawing 3]



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[Translation done.]

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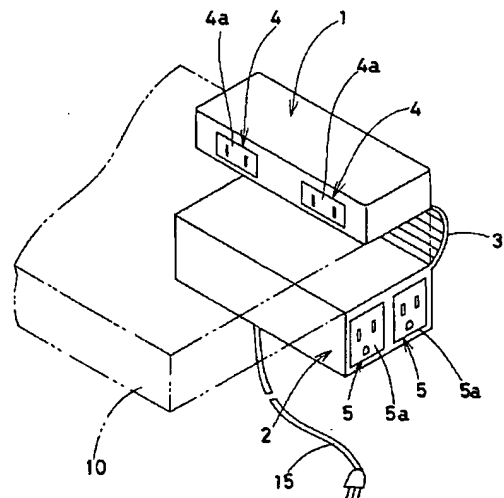
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(54)【発明の名称】 電源タップ

(57)【要約】

【課題】 デスク天板の上に配置される部分の小型化を図り、取付けおよび取外しが容易にする。

【解決手段】 接続器4、5を設けた上部本体1と下部本体2を備え、上部本体1と下部本体2の間にデスク天板10の端部を挟めるように両本体1、2を連結部3で連結し、かつこの連結部3に対向するデスク天板10の端面に対し上部本体1の接続器4の接続口4aを略直交方向に向けるとともに、下部本体2の接続器5の接続口5aを連結部3に対向するデスク天板10の端面の長手方向と略同方向に向けた。このように、接続器4、5を設けた上部本体1と下部本体2を備えているので、サイズの大きい接続器5を下部本体2に、サイズの小さい接続器4を上部本体1にそれぞれ設けることにより、デスク上に配置される上部本体1の小型化を図ることができ、デスク作業面を確保できる。



1...上部本体  
2...下部本体  
3...連結部  
4, 5...接続器  
4 a, 5 a...接続口  
1 0...デスク天板

## 【特許請求の範囲】

【請求項1】 接続器を設けた上部本体と下部本体を備え、前記上部本体と前記下部本体の間にデスク天板の端部を挟めるように両本体を連結部で連結し、かつこの連結部に対向する前記デスク天板の端面に対し上部本体の接続器の接続口を略直交方向に向けるとともに、下部本体の接続器の接続口を前記連結部に対向する前記デスク天板の端面の長手方向と略同方向に向けたことを特徴とする電源タップ。

【請求項2】 上部本体の接続器を2極とし、下部本体の接続器を3極とした請求項1記載の電源タップ。

【請求項3】 下部本体の接続器はノイズフィルタを内蔵した請求項1記載の電源タップ。

## 【発明の詳細な説明】

【0001】

【発明の属する技術分野】この発明は、電源タップに関するものである。

【0002】

【従来の技術】従来、デスク上にある電気機器の電源を取るために用いられる電源タップは、デスク上に置かれるか、または接地殺しを間に挟んで使用する等、使用形態が一様ではなく安定性に欠け見栄えが悪かった。そこで、例えば図3に示した実開昭62-137586号公報の開示技術のようにデスク天板50に締付金具51により固定できるようにしたものがあった。

【0003】

【発明が解決しようとする課題】しかしながら、接続口52が全てデスク天板50の上に配置される構成であるためケース53が大型化し、デスク天板50の上で作業する際の邪魔になることがあった。また、締付金具51により固定強度は高いが取付けおよび取外しに手間がかかるという問題点があった。

【0004】したがって、この発明の目的は、デスク天板の上に配置される部分の小型化を図り、取付けおよび取外しが容易な電源タップを電源タップを提供することである。

【0005】

【課題を解決するための手段】請求項1記載の電源タップは、接続器を設けた上部本体と下部本体を備え、前記上部本体と前記下部本体の間にデスク天板の端部を挟めるように両本体を連結部で連結し、かつこの連結部に対向する前記デスク天板の端面に対し上部本体の接続器の接続口を略直交方向に向けるとともに、下部本体の接続器の接続口を前記連結部に対向する前記デスク天板の端面の長手方向と略同方向に向けたことを特徴とするものである。

【0006】このように、接続器を設けた上部本体と下部本体を備えているので、サイズの大きい接続器を下部本体に、サイズの小さい接続器を上部本体にそれぞれ設けることにより、デスク上に配置される上部本体の小型

化を図ることができ、デスク作業面を確保できる。また、上部本体と下部本体を連結部で連結しているため、上部本体と下部本体の間にデスク天板の端部を挟むことにより簡単に取付けおよび取外しができる。また、連結部に対向するデスク天板の端面に対し上部本体の接続器の接続口を略直交方向に向けたので、デスク上に置かれた機器のプラグの抜き差しが容易に行える。また、下部本体の接続器の接続口を連結部に対向するデスク天板の端面の長手方向と略同方向に向けたので、デスク天板の端面に沿って下側へ出した電源コードの曲げを最小限に抑えて接続できる。

【0007】請求項2記載の電源タップは、請求項1において、上部本体の接続器を2極とし、下部本体の接続器を3極としたものである。このように、サイズの大きい3極の接続器をデスク天板の下側に配置し、サイズの小さい2極の接続器をデスク天板の上側に配置することにより、デスク上において作業の邪魔にならず、デスク作業面を確保できる。また、ラップトップ等のデスク上で使用するプラグ抜き差しの頻繁な機器は、上部本体の2極の接続器を使用することにより、容易に抜き差しできる。また、デスク天板の下に配置される3極の接続器は、デスクトップ等の据え置きタイプ機器用で殆ど抜き差しのない機器の使用に適する。

【0008】請求項3記載の電源タップは、請求項1において、下部本体の接続器はノイズフィルタを内蔵したものである。このノイズフィルタにより下部本体の接続器はノイズを除去できる。

【0009】

【発明の実施の形態】この発明の実施の形態の電源タップを図1および図2に基づいて説明する。この電源タップは、図1に示すように、上部本体1と下部本体2とを備え、これらの上部本体1と下部本体2の間にデスク天板10の端部を挟めるように両本体1、2の側縁を連結部3で連結している。また、上部本体1は2極の接続器4を2個内蔵し、下部本体2は3極の接続器5を4個内蔵している。

【0010】具体的には、上部本体1の前面に2極の接続器4の接続口4aを2個配置し、下部本体2の両側面に3極の接続器5の接続口5aを2個ずつ配置してある。これにより、取付状態において、連結部3に対向するデスク天板10の端面に対し上部本体1の接続口4aは略直交方向に向けられ、下部本体2の接続口5aは連結部3に対向するデスク天板10の端面の長手方向と略同方向に向けられる。また、連結部3は板ばね等の弾性材からなり、その弾性力で上部本体1と下部本体2をデスク天板10に圧着する。また、下部本体2の3極の接続器5は、1極がアースになっているものを含み、またノイズフィルタが内蔵してある。15は電源コードである。

【0011】つぎに、この電源タップの使用状態について

て説明する。図2において、6はラップトップ等の機器で、使用時にプラグを差し込み不使用時には抜いておく抜き差しの頻繁なタイプである。7はデスクトップ等の機器で、不使用時にもプラグを差し込んでおく殆ど抜き差しのないタイプである。同図に示すように、上部本体1と下部本体2の間にデスク天板10を挟み込むことにより、デスク天板10の前縁部に電源タップを取付ける。これにより、上部本体1の接続口4aが前方を向くので、デスク天板10の上で使用するラップトップ等の機器6の電源コード11のプラグ11aを接続口4aに容易に抜き差しできる。

【0012】また、上記デスク天板10の後方に別のデスク天板12を配置して、その上にデスクトップ等の機器7を載置している。このデスクトップ等の機器7の電源コード13はデスク天板10、12の対向する端面に沿って下側に出し、側方を向いた下部本体2の接続口5aに電源コード13のプラグ13aを接続する。この実施の形態によれば、サイズの大きい3極の接続器5を下部本体2に、サイズの小さい2極の接続器4を上部本体1にそれぞれ設けることにより、デスク上に配置される上部本体1の小型化を図ることができ、デスク上において作業の邪魔にならず、デスク作業面を確保できる。

【0013】また、上部本体1と下部本体2を連結部3で連結しているため、上部本体1と下部本体2の間にデスク天板10の端部を挟むことにより簡単に取付けおよび取外しができる。また、この場合、連結部3が両デスク天板10、12で挟持されるため、取付強度は高い。また、連結部3に対向するデスク天板10の端面に対し上部本体1の2極の接続器4の接続口4aを略直交方向に向けたので、デスク上に置かれたラップトップ等の機器6のプラグ11aの抜き差しが容易に行える。また、下部本体2の3極の接続器5の接続口5aを連結部3に対向するデスク天板10の端面の長手方向と略同方向に向けたので、デスク天板10の端面に沿って下側へ出したデスクトップ等の機器7の電源コード13の曲げを最小限に抑えて接続できる。また、下部本体2の3極の接続器5はノイズフィルタを内蔵したので、ノイズを除去できる。

【0014】なお、接続器4、5の数は何個でもよい。また、上部本体1の前面だけでなく後面に接続口を配置してもよい。この場合、図2において別のデスク天板12の使用者にとって抜き差しが容易になる。

#### 【0015】

【発明の効果】請求項1記載の電源タップによれば、接続器を設けた上部本体と下部本体を備えているので、サイズの大きい接続器を下部本体に、サイズの小さい接続器を上部本体にそれぞれ設けることにより、デスク上に配置される上部本体の小型化を図ることができ、デスク作業面を確保できる。また、上部本体と下部本体を連結部で連結しているため、上部本体と下部本体の間にデスク天板の端部を挟むことにより簡単に取付けおよび取外しができる。また、連結部に対向するデスク天板の端面に対し上部本体の接続器の接続口を略直交方向に向けたので、デスク上に置かれた機器のプラグの抜き差しが容易に行える。また、下部本体の接続器の接続口を連結部に対向するデスク天板の端面の長手方向と略同方向に向けたので、デスク天板の端面に沿って下側へ出した電源コードの曲げを最小限に抑えて接続できる。

【0016】請求項2では、サイズの大きい3極の接続器をデスク天板の下側に配置し、サイズの小さい2極の接続器をデスク天板の上側に配置することにより、デスク上において作業の邪魔にならず、デスク作業面を確保できる。また、ラップトップ等のデスク上で使用するプラグ抜き差しの頻繁な機器は、上部本体の2極の接続器を使用することにより、容易に抜き差しできる。また、デスク天板の下に配置される3極の接続器は、デスクトップ等の据え置きタイプ機器用で殆ど抜き差しのない機器の使用に適する。

【0017】請求項3では、ノイズフィルタにより下部本体の接続器はノイズを除去できる。

#### 【図面の簡単な説明】

【図1】この発明の実施の形態の電源タップの斜視図である。

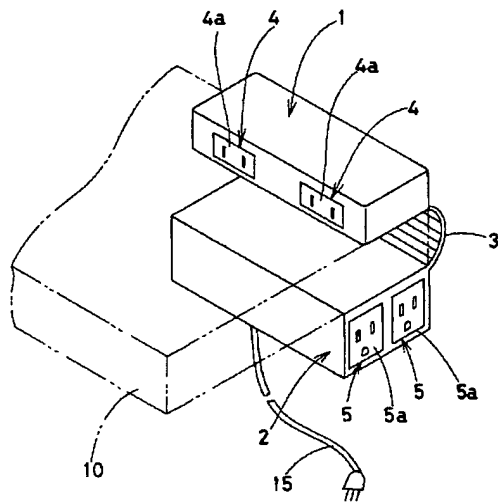
【図2】実施の形態の電源タップの使用状態の側面図である。

【図3】従来の電源タップの側面図である。

#### 【符号の説明】

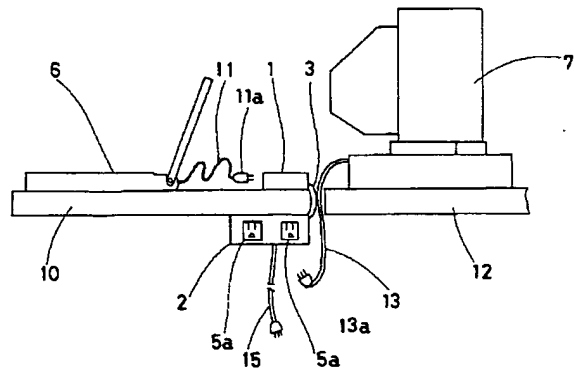
- 1 上部本体
- 2 下部本体
- 3 連結部
- 4, 5 接続器
- 4a, 5a 接続口
- 10 デスク天板

【図1】

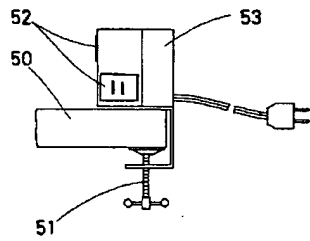


1...上部本体  
 2...下部本体  
 3...電源スイッチ  
 4...接続部  
 4a...接続口  
 5...接続部  
 5a...接続口  
 10...デスク天板

【図2】



【図3】



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